

7/4/03

REMARKS

The Office Action of June 18, 2003, has been carefully reviewed, and reconsideration of the amended application is respectfully requested.

The amendments in the specification are intended to correct typographical errors, including the one on page 12, which was kindly noted by the Examiner. The amendments of claims 20, 22, 23, and 25 are also intended to correct deficiencies that were also kindly pointed out by the Examiner. The two new claims, 27 and 28, are intended to assure the same protection to the apparatus as that provided by the methods claim 25.

As to the apparent contradiction re Figures 3 and 4 raised in the last paragraph of Page 2 of the Office Action, it is clearly resolved in the BRIEF DESCRIPTION OF THE DRAWINGS, starting on Page 6, Line 18, of the specification, which refers to the view of Fig. 3 as representing preferred embodiments of the invention in plural, with Figures 4 and 5 showing two different views of Section A-A' applicable to two different embodiments.

As to the questions raised at the top of Page 3 of the Office Action pertaining to the two working electrodes of claim 22, these are clearly answered in the specification, starting with Page 14, Line 23, through Page 15, Line 4, with the supporting discussion explicitly referring to Figures 1 and 6.

The above amendments and remarks should overcome the rejection based on 35 U.S.C. 112. As to the prior art rejections based on 35 U.S.C. 102, the following distinctions are noted between the cited Connery patent and the present invention:

1. There is no mention in the cited patent of either repeated reconversions or of amplification of the measurement signal. Connery's improved sensitivity is attributed mainly to the absence of a net reaction in the electrolyte [see Column 8, Line 56, through Column 9, Line 29].
2. The cited patent does not disclose "means for preventing or minimizing the occurrence of said analyte reaction or reaction of any interfering gas at said counter electrode and/or reference electrode" [Claim 1] or "means for reconverting the product of the analyte reaction back to the analyte and then reacting it again at the working electrode, with such back-and-forth reactions repeating many times, so as to yield an amplification of the analyte signal" [claim 18] or "a second working electrode for reconverting the product of the analyte reaction back to the analyte and then reacting it again at the first working electrode, with such back-and-forth reactions repeating many times, so as to yield an amplification of the analyte signal" [claim 22].

8 of 10

3. In the Connery patent, there is no direct contact between the electrodes or electrolyte layer and the gaseous medium, which is separated therefrom by a semi-permeable barrier 34 [see their Figures 4-6]. In contrast, the present invention calls for "passing a sample of said gaseous medium over a pair of interdigitated electrodes" [claims 25, 27, and 28 and Figures 3-5] with no barrier between the electrodes and the gaseous medium other than a thin electrolyte layer.
4. Connery relies on the fact that one electrode will consume O_2 and a second electrode will generate it Faradaically [so there is no change in oxygen concentration in the inside and no transport across the membrane]. No such mechanism is disclosed or claimed in the present application. Connery has a barrier permeable only to the analyte that is not disclosed or claimed here. Connery has an equilibrium established across the barrier that is not disclosed or claimed here. Therefore, Connery is discussing an altogether different structure and mechanism than in the present invention.

In view of these distinctions, the Connery patent does not anticipate the present invention in any way. All the pending claims therefore appear to be allowable.

A credit card payment of \$42.00 for one independent claim in excess of three is attached.

Respectfully submitted by,



Solomon Zaromb
Registration No. 28,571
9S 706 William Dr.
Hinsdale, IL 60527
Telephone: 630/654-2109
Fax: 630/986-8764

RECEIVED
CENTRAL FAX CENTER
SEP 21 1993

OFFICIAL

9 of 10

CERTIFICATION OF FAXING

The undersigned hereby certifies that this response is about to be transmitted to fax number 703-872-9310 on or about September 8, 2003.


Solomon Zaromb